

REMARKS

Claims 1-3 and 6-11 have been rejected by the Examiner under 35 USC 103(a) as being unpatentable over U.S. Patent No. 6,617,409 to Yukawa et al. in view of U.S. Patent No. 6,177,196B1 to Brothers et al. Claim 4 has been rejected by the Examiner under 35 USC 103(a) as being unpatentable over the combined teaching of Yukawa and Brothers and further in view of U.S. Patent No. 6,489,396B2 to Nakamura et al. In addition, claim 5 has been rejected by the Examiner under 35 USC 103(a) as being unpatentable over the combined teaching of Yukawa and Brothers and further in view of U.S. Patent No. 5,216,081, to Mohri et al. These rejections are respectfully traversed.

The present invention is directed to a flake pigment provided with a coating made of a resin composition containing a copolymer comprising a bond unit from a fluorine polymerizable monomer having alkyl fluoride groups and a bond unit arising from a polymerizable monomer having phosphate groups. The flaked pigment is used in paint for providing the paint with high brightness. Thus, the flaked pigment of the present invention is usable in a powder paint for supplying a film with excellent metallic properties, high brightness and excellent secondary adhesiveness.

As recognized by the Examiner, the prior art references relied upon to reject the claims of the present application do not meet the two main features of the present invention, that is, wherein all of the alkyl fluoride groups and all of the phosphate groups are present in separate side chains of the copolymer and the fact that the resultant copolymer is soluble in a solvent due to its molecular structure. Thus, in the flaked pigment of the present invention, the copolymer covering the flake particle contains:

1. a bond unit arising from a fluorine polymerizable monomer having alkyl fluoride groups; and
2. a bond unit arising from a polymerizable monomer having phosphate groups.

Since all of the alkyl fluoride groups and all of the phosphate groups are contained in different bond units, respectively, they are present in independent respective side chains in the copolymer.

On page 4 of the Examiner's Office Action letter, the Examiner appears to recognize that all of the alkyl fluoride groups and all of the phosphate groups of the prior art are not present in independent respective side chains in the copolymer. However, he argues that the instant claims do not use the transition phrase "consist of," and therefore the claims are open such that they are not limited whereby all of the fluorine and all of the phosphor groups are in different side chains. However, as the Examiner will note, both claims 1 and 11 have been amended to specifically recite that all of the alkyl fluoride groups and all of the phosphate groups are present in separate side chains of the copolymer. Thus, the claims of the present application clearly distinguish the present invention from the prior art references. The alkyl fluoride group in the copolymer molecular structure exhibits inferior affinity with respect to other substances and the phosphate group in the copolymer molecular structure exhibits excellent absorbability of the phosphate group because the respective groups are present in independent side chains. In other words, such independent roles are never fulfilled if these groups are present in an identical side chain, because, in the copolymer, the side chain having the phosphate groups is selectively adsorbed to the flake particles and the side chain having the alkyl fluoride groups is provided away from the phosphate groups, and consequently, the side chain is likely to form the outermost surface of the flake particle. Accordingly, the effect originating from the fluorine polymerizable monomer and the effect originating from the polymerizable monomer having phosphate groups are exhibited without contracting each other.

Furthermore, the copolymer of the present invention is soluble in a solvent when coating the surfaces of the flake particles by adsorption as a finishing agent. Therefore, each of the aforementioned fluorine polymerizable monomer having alkyl fluoride groups and the polymerizable monomer having phosphate groups is preferably a monomer having only one polymerization activating site in one molecular, and the obtained polymer is desirably a linear

skeleton polymer. Thus it is believed that the amendments made to claims 1 and 11 clearly distinguish the present invention from the prior art relied upon by the Examiner. Since the issue of providing all of the alkyl fluoride groups and all of the phosphate groups in independent, respectively side chains in the copolymer has always been argued by the Applicants, it is believed that the amendments made to claims 1 and 11 represent "old issues" and not "new issues" in connection with the prosecution of the present application, and accordingly, it is believed that the Examiner should not deny entry of the present Amendment since the Applicants have merely attempted to resolve claim construction with respect to issues which have always been present during the prosecution of the present application.

Concerning the Examiner's rejection of the claims over the prior art, the Examiner has determined to ignore the fact that the coatings in the Brothers reference are useful for articles requiring "anti-reflective" properties. Specifically, the Brothers reference clearly states in Col. 5, lines 37-40, that the coating of the Brothers reference can be useful for articles requiring an "anti-reflective" characteristic. The flake aluminum pigment allegedly described in the Yukawa et al. reference is similar to the flake pigment of the present invention in the sense that it possesses metallic and brightness properties. That is, the flake aluminum pigment in the Yukawa reference is clearly directed to an article requiring "reflective" characteristics as distinguished from "anti-reflective" characteristics. Since the monomer in the Brothers reference is utilized in an article requiring "anti-reflective" characteristics, such a disclosure teaches against combining the references using the obviousness standard as defined by 35 USC 103.

Even if, for sake of argument, it would be possible to combine the references as suggested by the Examiner, said combination would still not suggest the present invention. Specifically, the fluoro polymer in the Brothers references includes alkyl fluoride groups and phosphate groups in one molecule. Therefore, even though the fluoro polymer in the Brothers reference is copolymerized with a phosphate monomer or a phosphoric acid monomer in the Yukawa reference, the alkyl fluoride group and the phosphate group would not be present in separate side chains in the copolymer, as in the present invention. As long as the alkyl fluoride

group and the phosphate group are present in the identical side chain, even in a part of the copolymer, the excellent effect of the present invention cannot be achieved because only when these groups are present in separate side chains can the alkyl fluoride group serve to float the flake pigment on the surface of the film and can the phosphate group serve to absorb the copolymer to the flake particles (please see in this regard page 12, lines 2-6 and page 13, lines 1-11 of the present specification).

Concerning the feature of the present invention wherein the Applicant's copolymer is soluble in a solvent due to its molecular structure, the Examiner has acknowledged that the combined teachings of the Yukawa and Brothers references are completely silent with respect to this feature. Such an argument, based upon "inherency" cannot be based upon probability or possibility but rather, "inherency" requires that the missing descriptive material is necessarily present and not merely probably or possibly present. It is believed that this high standard has not been met in the present situation.

Accordingly, in view of the above amendments and remarks reconsideration of the rejections and allowance of all of the claims of the present application are respectfully requested. In the event that the proposed Amendment does not place the present application into condition for allowance, entry thereof is respectfully requested as placing the present application into better condition for appeal.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Joseph A. Kolasch, Reg. No. 22,463 at the telephone number of the undersigned below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

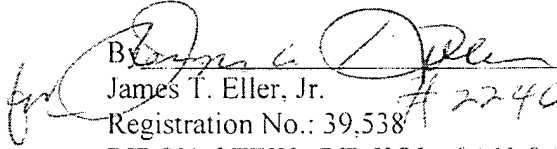
Application No. 10/540,004
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Docket No.: 0033-1008PUS1

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37.C.F.R. §§1.16 or 1.17; particularly, extension of time fees.

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Respectfully submitted,


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